



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/571,667	05/11/2007	Erik de Vries	I - 2003.010 US	2304
31846	7590	11/13/2007	EXAMINER	
INTERVET INC.			OGUNBIYI, OLUWATOSIN A	
PATENT DEPARTMENT			ART UNIT	PAPER NUMBER
PO BOX 318			1645	
MILLSBORO, DE 19966-0318				
MAIL DATE		DELIVERY MODE		
11/13/2007		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/571,667	DE VRIES ET AL.
	Examiner Oluwatosin Ogunbiyi	Art Unit 1645

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,4,7-14 and 16-25 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) \_\_\_\_\_ is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) 1,4,7-14 and 16-25 are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Claims 1,4,7-14,16-25 are pending in the application. Claims 2,3,5,6, and 15 have been cancelled.

#### ***Election/Restrictions***

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group 1, claim(s) 1,4,7,8,9,10,11-12,13,16,21,22,23,24,25, in part, the first appearing technical feature drawn to a protein comprising, an amino acid sequence selected from the group consisting of: i) SEQ ID NO:2, ii) immunogenic fragments of SEQ ID NO: 2 wherein said protein inhibits invasion of an organism of the family Piroplasmida; drawn to a nucleic acid, wherein said nucleic acid encodes a protein according SEQ ID NO: 2 or an immunogenic fragment of SEQ ID NO: 2 and drawn to a prophylactic or therapeutic treatment of an infection or its clinical signs caused by a Piroplasmid organism comprising administering a vaccine comprising a protein according SEQ ID NO:2 or an immunogenic fragment of SEQ ID NO:2 and a pharmaceutically acceptable carrier.

Group 2, claim(s) 1,11-12,13, in part, the second appearing technical feature drawn to a protein comprising, an amino acid sequence selected from the group consisting of: i) SEQ ID NO:4, ii) immunogenic fragments of SEQ ID NO: 4 wherein said protein inhibits invasion of an organism of the family Piroplasmida.

Group 3, claim(s) 1,11-12,13, in part, the third appearing technical feature drawn to a protein comprising, an amino acid sequence selected from the group

consisting of: i) SEQ ID NO: 6, ii) immunogenic fragments of SEQ ID NO: 6 wherein said protein inhibits invasion of an organism of the family Piroplasmida.

Group 4, claim(s) 1,11-12,13, in part, the fourth appearing technical feature drawn to a protein comprising, an amino acid sequence selected from the group consisting of: i) SEQ ID NO:8, ii) immunogenic fragments of SEQ ID NO: 8 wherein said protein inhibits invasion of an organism of the family Piroplasmida.

Group 5, claim(s) 1,11-12,13, in part, the fifth appearing technical feature drawn to a protein comprising, an amino acid sequence selected from the group consisting of: i) SEQ ID NO:10, ii) immunogenic fragments of SEQ ID NO: 10 wherein said protein inhibits invasion of an organism of the family Piroplasmida.

Group 6, claim(s) 4,7,8,9,10,21,22,23,24,25, in part drawn to a nucleic acid, wherein said nucleic acid encodes a protein according to SEQ ID NO: 4 or an immunogenic fragment of SEQ ID NO: 4.

Group 7, claim(s) 4,7,8,9,10,21,22,23,24,25, in part drawn to a nucleic acid, wherein said nucleic acid encodes a protein according to SEQ ID NO: 6 or an immunogenic fragment of SEQ ID NO: 6.

Group 8, claim(s) 4,7,8,9,10,21,22,23,24,25, in part drawn to a nucleic acid, wherein said nucleic acid encodes a protein according to SEQ ID NO: 8 or an immunogenic fragment of SEQ ID NO: 8.

Group 9, claim(s) 4,7,8,9,10,21,22,23,24,25, in part drawn to a nucleic acid, wherein said nucleic acid encodes a protein according to SEQ ID NO: 10 or an immunogenic fragment of SEQ ID NO: 10.

Group 11, claim(s) 16, in part, drawn to a prophylactic or therapeutic treatment of an infection or its clinical signs caused by a Piroplasmid organism comprising administering a vaccine comprising a protein according to SEQ ID NO:4 or an immunogenic fragment of SEQ ID NO:4 and a pharmaceutically acceptable carrier.

Group 12, claim(s) 16, in part, drawn to a prophylactic or therapeutic treatment of an infection or its clinical signs caused by a Piroplasmid organism comprising administering a vaccine comprising a protein according to SEQ ID NO:6 or an immunogenic fragment of SEQ ID NO:6 and a pharmaceutically acceptable carrier.

Group 13, claim(s) 16, in part, drawn to a prophylactic or therapeutic treatment of an infection or its clinical signs caused by a Piroplasmid organism comprising administering a vaccine comprising a protein according to SEQ ID NO:8 or an immunogenic fragment of SEQ ID NO:8 and a pharmaceutically acceptable carrier.

Group 14, claim(s) 16, in part, drawn to a prophylactic or therapeutic treatment of an infection or its clinical signs caused by a Piroplasmid organism comprising administering a vaccine comprising a protein according to SEQ ID NO: 10 or an immunogenic fragment of SEQ ID NO:10 and a pharmaceutically acceptable carrier.

Group 15, claim(s) 14 in part, drawn to a vaccine comprising an antibody against a protein according SEQ ID NO:2 or an immunogenic fragment of SEQ ID NO:2 and a pharmaceutically acceptable carrier

Group 16, claim(s) 14 in part, drawn to a vaccine comprising an antibody against a protein according SEQ ID NO:4 or an immunogenic fragment of SEQ ID NO:4 and a pharmaceutically acceptable carrier

Group 17, claims 14 in part, drawn to a vaccine comprising an antibody against a protein according SEQ ID NO:6 or an immunogenic fragment of SEQ ID NO:6 and a pharmaceutically acceptable carrier

Group 18, claim(s) 14 in part, drawn to a vaccine comprising an antibody against a protein according SEQ ID NO:8 or an immunogenic fragment of SEQ ID NO:8 and a pharmaceutically acceptable carrier

Group 19, claim(s) 14 in part, drawn to a vaccine comprising an antibody against a protein according SEQ ID NO:10 or an immunogenic fragment of SEQ ID NO:10 and a pharmaceutically acceptable carrier.

Group 20, claim(s) 17 in part, drawn to a prophylactic or therapeutic treatment of an infection or its clinical signs caused by a Piroplasmid organism comprising administering a vaccine comprising a nucleic acid wherein said nucleic acid encodes a protein according to SEQ ID NO:2 or an immunogenic fragment of SEQ ID NO:2 and a pharmaceutically acceptable carrier

Group 21, claim(s) 17 in part, drawn to a prophylactic or therapeutic treatment of an infection or its clinical signs caused by a Piroplasmid organism comprising administering a vaccine comprising a nucleic acid wherein said nucleic acid encodes a protein according to SEQ ID NO:4 or an immunogenic fragment of SEQ ID NO:4 and a pharmaceutically acceptable carrier

Group 22, claim(s) 17 in part, drawn to a prophylactic or therapeutic treatment of an infection or its clinical signs caused by a Piroplasmid organism comprising

Art Unit: 1645

administering a vaccine comprising a nucleic acid wherein said nucleic acid encodes a protein according to SEQ ID NO:6 or an immunogenic fragment of SEQ ID NO:6 and a pharmaceutically acceptable carrier

Group 23, claim(s) 17 in part, drawn to a prophylactic or therapeutic treatment of an infection or its clinical signs caused by a Piroplasmid organism comprising administering a vaccine comprising a nucleic acid wherein said nucleic acid encodes a protein according to SEQ ID NO:8 or an immunogenic fragment of SEQ ID NO:8 and a pharmaceutically acceptable carrier

Group 24, claim(s) 17 in part, the drawn to a prophylactic or therapeutic treatment of an infection or its clinical signs caused by a Piroplasmid organism comprising administering a vaccine comprising a nucleic acid wherein said nucleic acid encodes a protein according to SEQ ID NO: 10 or an immunogenic fragment of SEQ ID NO: 10 and a pharmaceutically acceptable carrier

Group 25, claim(s) 18 in part, the drawn to a diagnostic test for the detection of a nucleic acid associated with a Piroplasmid organism comprising (i) a nucleic acid sequence depicted in SEQ ID NO: 1(ii) a nucleic acid that is complementary to (i), or (iii) a nucleic acid that hybridizes to (i) under stringent conditions; wherein (i), (ii) and (iii) each have a length of at least 15 nucleotides.

Group 26, claim(s) 18 in part, drawn to a diagnostic test for the detection of a nucleic acid associated with a Piroplasmid organism comprising (i) a nucleic acid sequence depicted in SEQ ID NO: 3 (ii) a nucleic acid that is complementary to (i), or (iii) a nucleic acid that hybridizes to (i) under stringent conditions; wherein (i), (ii) and (iii) each have a length of at least 15 nucleotides.

Group 27, claim(s) 18 in part, drawn to a diagnostic test for the detection of a nucleic acid associated with a Piroplasmid organism comprising (i) a nucleic acid

Art Unit: 1645

sequence depicted in SEQ ID NO: 5 (ii) a nucleic acid that is complementary to (i), or (iii) a nucleic acid that hybridizes to (i) under stringent conditions; wherein (i), (ii) and (iii) each have a length of at least 15 nucleotides.

Group 28, claim(s) 18 in part, drawn to a diagnostic test for the detection of a nucleic acid associated with a Piroplasmid organism comprising (i) a nucleic acid sequence depicted in SEQ ID NO: 7 (ii) a nucleic acid that is complementary to (i), or (iii) a nucleic acid that hybridizes to (i) under stringent conditions; wherein (i), (ii) and (iii) each have a length of at least 15 nucleotides.

Group 29, claim(s) 18 in part, drawn to a diagnostic test for the detection of a nucleic acid associated with a Piroplasmid organism comprising (i) a nucleic acid sequence depicted in SEQ ID NO: 9 (ii) a nucleic acid that is complementary to (i), or (iii) a nucleic acid that hybridizes to (i) under stringent conditions; wherein (i), (ii) and (iii) each have a length of at least 15 nucleotides.

Group 30, claim(s) 19 in part, drawn to a diagnostic test for the detection of antibodies against a Piroplasmid organism comprising a SEQ ID NO:2 or an immunogenic fragment of SEQ ID NO: 2.

Group 31, claim(s) 19 in part, drawn to a diagnostic test for the detection of antibodies against a Piroplasmid organism comprising a SEQ ID NO:4 or an immunogenic fragment of SEQ ID NO: 4.

Group 32, claim(s) 19 in part, drawn to a diagnostic test for the detection of antibodies against a Piroplasmid organism comprising a SEQ ID NO:6 or an immunogenic fragment of SEQ ID NO: 6.

Art Unit: 1645

Group 33, claim(s) 19 in part, drawn to a diagnostic test for the detection of antibodies against a Piroplasmid organism comprising a SEQ ID NO:8 or an immunogenic fragment of SEQ ID NO: 8.

Group 34, claim(s) 19 in part, drawn to a diagnostic test for the detection of antibodies against a Piroplasmid organism comprising a SEQ ID NO:10 or an immunogenic fragment of SEQ ID NO: 10.

Group 35, claim(s) 20 in part, drawn to a diagnostic test for the detection of antigenic material from a Piroplasmid organism comprising an antibody against SEQ ID NO:2 or an immunogenic fragment of SEQ ID NO: 2.

Group 36, claim(s) 20 in part, drawn to a diagnostic test for the detection of antigenic material from a Piroplasmid organism comprising an antibody against SEQ ID NO:4 or an immunogenic fragment of SEQ ID NO: 4.

Group 37, claim(s) 20 in part, drawn to a diagnostic test for the detection of antigenic material from a Piroplasmid organism comprising an antibody against SEQ ID NO: 6 or an immunogenic fragment of SEQ ID NO: 6.

Group 38, claim(s) 20 in part, drawn to a diagnostic test for the detection of antigenic material from a Piroplasmid organism comprising an antibody against SEQ ID NO: 8 or an immunogenic fragment of SEQ ID NO: 8.

Group 39, claim(s) 20 in part, drawn to a diagnostic test for the detection of antigenic material from a Piroplasmid organism comprising an antibody against SEQ ID NO: 10 or an immunogenic fragment of SEQ ID NO: 10.

The inventions listed as Groups 1-39 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the protein sequences of SEQ ID: 2, 4, 6,8,10 lack a common amino acid structure and thus the proteins sequences lack unity.

***Notice of Possible Rejoinder***

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

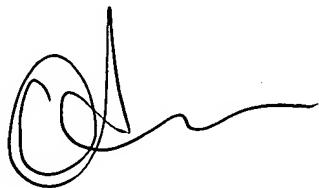
Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Oluwatosin Ogunbiyi whose telephone number is 571-272-9939. The examiner can normally be reached on M-F 8:30am-5pm.

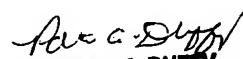
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bruce Campell can be reached on 571-272-0974. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Oluwatosin Ogunbiyi

Art unit, 1645



PATRICIA A. DUFFY  
PRIMARY EXAMINER